

## **CLAIMS**

What is claimed is:

- 5           1.       A suction cautery dissector comprising:
- a handle assembly;
- a tubing assembly having a suction channel formed therein, the tubing assembly
- comprising a first portion connected to the handle assembly and a distal end;
- a tip assembly at the distal end of the insulated tubing assembly, the tip assembly
- 10       comprising a substantially co-planar, enclosed cautery surface with a beveled leading edge
- sharpened for dissecting tissue, the cautery surface having an opening formed therein that
- communicates with the suction channel in the insulated tubing assembly and being operably
- connected to an electrical source.
2.       The suction cautery dissector of claim 1 wherein the tip assembly comprises a tip
- 15       wall terminating at the cautery surface and wherein the tubing assembly comprises an insulating
- layer covering the suction channel from the first portion to the distal end, terminating at a
- minimum predetermined distance along the tip wall from the cautery surface around the
- circumference of the tip assembly to enable the tip assembly to make surface contact around the
- entire tip wall.
- 20           3.       The suction cautery dissector of claim 1 wherein the tubing assembly comprises
- an angled portion between the first portion and the distal end, the angled portion forming an
- obtuse angle between the distal end and the first portion.
4.       The suction cautery dissector of claim 1 wherein the obtuse angle comprises
- approximately 140 degrees.

5. The suction cautery dissector of claim 1 wherein the vertex of the obtuse angle is positioned approximately 2 c.m. from the leading edge of the tip assembly.

6. The suction cautery dissector of claim 1 wherein the beveled leading edge is beveled at an angle of approximately 45 degrees.

5 7. The suction cautery dissector of claim 1 wherein the tip assembly and cautery surface are operably connected to an electrical source through the suction channel, the suction channel comprising an electrically conducting material connected to an electrical wire in the handle assembly.

8. The suction cautery dissector of claim 1 wherein the suction channel also  
10 connects to a suction port in the handle assembly to control suction of air through the opening in the cautery surface.

9. The suction cautery dissector of claim 1 wherein the tip assembly operates to simultaneously dissect tissue with the beveled leading edge, cauterize tissue with at least the cautery surface and a portion of the tip wall and remove materials by suction through the opening  
15 in the cautery surface.

10. A suction cautery dissector comprising:

a handle assembly;

a tubing assembly having a suction channel formed therein, the tubing assembly comprising a first portion connected to the handle assembly and a distal end;

20 a tip assembly at the distal end of the insulated tubing assembly, the tip assembly comprising a cautery surface with a beveled leading edge sharpened for dissecting tissue and a tip wall terminating at the cautery surface, the cautery surface having an opening formed therein

that communicates with the suction channel in the insulated tubing assembly and being operably connected to an electrical source;

wherein the tubing assembly comprises an insulating layer covering the suction channel from the first portion to the distal end, terminating at a minimum predetermined distance along the tip wall from the cautery surface around the circumference of the tip assembly to enable the tip assembly to make surface contact around the entire tip wall.

11. The suction cautery dissector of claim 10 wherein the tubing assembly comprises an angled portion between the first portion and the distal end, the angled portion forming an obtuse angle between the distal end and the first portion.

12. The suction cautery dissector of claim 10 wherein the obtuse angle comprises approximately 140 degrees.

13. The suction cautery dissector of claim 10 wherein the vertex of the obtuse angle is positioned approximately 2 c.m. from the leading edge of the tip assembly.

14. The suction cautery dissector of claim 10 wherein the beveled leading edge is beveled at an angle of approximately 45 degrees.

15. The suction cautery dissector of claim 10 wherein the tip assembly and cautery surface are operably connected to an electrical source through the suction channel, the suction channel comprising an electrically conducting material connected to an electrical wire in the handle assembly.

16. The suction cautery dissector of claim 10 wherein the suction channel also connects to a suction port in the handle assembly to control suction of air through the opening in the cautery surface.

17. The suction cautery dissector of claim 10 wherein the tip assembly operates to simultaneously dissect tissue with the beveled leading edge, cauterize tissue with at least the cautery surface and a portion of the tip wall and remove materials by suction through the opening in the cautery surface.

5 18. The suction cautery dissector of claim 10 wherein the cautery surface comprises a semi-cylindrical shape.

19. The suction cautery dissector of claim 10 wherein the cautery surface is substantially co-planar.

10 20. The suction cautery dissector of claim 10 wherein the leading edge comprises an ovoid shape.